What is claimed is:

1. An image forming apparatus comprising:

an LED print head having an LED array formed by a plurality of LED elements which are controlled to emit light in accordance with image data and a drive circuit for driving the plurality of LED elements; and

an LED array controller for driving and controlling the LED print head, wherein

the LED array controller includes:

a characteristic data memory for storing a plurality of pieces of characteristic data regarding each of the plurality of LED elements; and

a drive current correction data calculator for reading out the characteristic data from the characteristic data memory and calculating drive current correction data for each of the plurality of LED elements on a basis of the characteristic data.

2. An image forming apparatus according to claim 1, wherein

the LED array controller further includes a drive current correction data memory for reading out the drive current correction data from the drive current correction data calculator and storing the drive current correction data.

3. An image forming apparatus according to claim 1, wherein

in the characteristic data memory, light quantity data regarding each of the plurality of LED elements is stored as the characteristic data.

4. An image forming apparatus according to claim 1, wherein

in the characteristic data memory, data regarding a beam emitted from each of the plurality of LED elements is stored as the characteristic data.

5. An image forming apparatus according to claim 1, wherein

in the characteristic data memory, resolution data regarding each of the plurality of LED elements is stored as the characteristic data.

6. An image forming apparatus comprising:

an LED print head having an LED array formed by a plurality of LED elements which are controlled to emit light in accordance with image data and a drive circuit for driving the plurality of LED elements; and

an LED array controller for driving and controlling the LED print head, wherein

the LED array controller includes:

a characteristic data memory for storing a plurality of pieces of characteristic data regarding each of the plurality of LED elements; and

a drive current correction data calculator for reading out characteristic data of a predetermined LED element and characteristic data of a plurality of LED elements in a predetermined range including the predetermined LED element out of the plurality of pieces of characteristic data from the characteristic data memory, and calculating drive current correction data for the predetermined LED element on a basis of the characteristic data of the predetermined LED element and the characteristic data regarding each of the plurality of LED elements in the predetermined range.

7. An image forming apparatus comprising:

an LED print head having an LED array formed by a plurality of LED elements which are controlled to emit light in accordance with image data and a drive circuit for driving the plurality of LED elements; and

an LED array controller for driving and controlling the LED print head, wherein

the LED array controller includes:

a characteristic data memory for storing a plurality of pieces of characteristic data regarding each of the plurality of LED elements; and

a drive current correction data calculator for reading out characteristic data of a predetermined LED element and an average value of characteristic data of a plurality of LED elements in a predetermined range including the predetermined LED element out of the plurality of pieces of characteristic data from the characteristic data memory, and calculating drive current correction data for the predetermined LED element on a basis of the characteristic data of the predetermined LED element and the average value of the characteristic data regarding each of the plurality of LED elements in the predetermined range.

8. An image forming apparatus comprising:

an LED print head having an LED array formed by a plurality of LED elements which are controlled to emit light in accordance with image data and a drive circuit for driving the plurality of LED elements; and

an LED array controller for driving and controlling the LED print head, wherein

the LED array controller includes:

a characteristic data memory for storing a plurality of pieces of characteristic data

regarding each of the plurality of LED elements; and

a drive current correction data calculator for reading out characteristic data of a predetermined LED element and an average value of characteristic data of all of the plurality of LED elements forming the LED array out of the plurality of pieces of characteristic data from the characteristic data memory, and calculating drive current correction data for the predetermined LED element on a basis of the characteristic data of the predetermined LED element and the average value of the characteristic data of all of the plurality of LED elements constructing the LED array.

9. An image forming apparatus according to claim 1, wherein

the drive current correction data satisfies the following equation:

$P_n = a_n + \alpha \cdot (b_n - B_{ave}) / B_{ave}$

where P_n represents drive current correction data of the n-th LED element,

a_n represents drive current reference data of the n-th LED element for making the light quantity for each of the LED element substantially equal,

b_n represents data regarding a beam of the n-th LED element,

B_{ave} represents an average value of data regarding beams of all of the LED elements or an average value of data regarding beams of a plurality of LED elements in a predetermined range including the n-th LED element, and

α represents an arithmetic coefficient regarding a beam.

10. An image forming apparatus according to claim 1, wherein

the drive current correction data satisfies the following equation:

$$P_n = a_n + \alpha \cdot (b_n - B_{ave}) / B_{ave} + \beta \cdot (c_n - C_{ave}) / C_{ave}$$

where P_n represents drive current correction data of the n-th LED element,

a_n represents drive current reference data of the n-th LED element for making the light quantity for each of the LED element substantially equal,

b_n represents data regarding a beam of the n-th LED element,

B_{ave} represents an average value of data regarding beams of all of the LED elements or an average value of data regarding beams of a plurality of LED elements in a predetermined range including the n-th LED element,

α represents an arithmetic coefficient regarding a beam,

c_n represents resolution data of the n-th LED element,

C_{ave} represents an average value of resolution data of all of LED elements or an average value of resolution data of a plurality of LED elements in a predetermined range including the n-th LED element, and

β represents an arithmetic coefficient regarding resolution.

11. An image forming apparatus comprising:

an LED print head having an LED array formed by a plurality of LED elements which are controlled to emit light in accordance with image data and a drive circuit for driving the plurality of LED elements; and

an LED array controller for driving and controlling the LED print head, wherein

the LED array controller includes:

a characteristic data memory for storing a plurality of pieces of characteristic data regarding each of the plurality of LED elements;

an LED element characteristic data arranger for reading out the characteristic data from the characteristic data memory and arranging the characteristic data for each of the plurality of LED elements; and

a drive current correction data calculator for calculating drive current correction data for each of the plurality of LED elements on a basis of the characteristic data arranged for each of the plurality of LED elements by the LED element characteristic data arranger.

12. An image forming apparatus according to claim 11, further comprising:

an LED element characteristic data memory for storing characteristic data arranged for each of the LED elements by the LED element characteristic data arranger.

13. An image forming apparatus comprising:

an LED print head having an LED array formed by a plurality of LED elements which are controlled to emit light in accordance with image data and a drive circuit for driving the plurality of LED elements; and

an LED array controller for driving and controlling the LED print head, wherein

the LED array controller includes:

a characteristic data memory for storing a plurality of pieces of characteristic data regarding each of the plurality of LED elements; and

a light emission time correction data calculator for reading out the characteristic data from the characteristic data memory and calculating light emission time correction data for each of the plurality of LED elements on a basis of the characteristic data.

14. An image forming apparatus according to claim 13, wherein

the LED array controller further includes a light emission time correction data memory for reading out the light emission time correction data from the light emission time correction data calculator and storing the light emission time correction data.

15. An image forming apparatus according to claim 13, wherein

in the characteristic data memory, light quantity data regarding each of the plurality of LED elements is stored as the characteristic data.

16. An image forming apparatus according to claim 13, wherein

in the characteristic data memory, data regarding a beam emitted from each of the plurality of LED elements is stored as the characteristic data.

17. An image forming apparatus according to claim 13, wherein

in the characteristic data memory, resolution data regarding each of the plurality of LED elements is stored as the characteristic data.

18. An image forming apparatus comprising:

an LED print head having an LED array formed by a plurality of LED elements which are controlled to emit light in accordance with image data and a drive circuit for driving the plurality of LED elements; and

an LED array controller for driving and controlling the LED print head, wherein

the LED array controller includes:

a characteristic data memory for storing a plurality of pieces of characteristic data regarding each of the plurality of LED elements; and

a light emission time correction data calculator for reading out characteristic data of a predetermined LED element and characteristic data of a plurality of LED elements in a predetermined range including the predetermined LED element out of the plurality of pieces of characteristic data from the characteristic data memory, and calculating light emission time correction data for the predetermined LED element on a basis of the characteristic data of the predetermined LED element and the characteristic data regarding each of the plurality of LED elements in the predetermined range.

19. An image forming apparatus comprising:

an LED print head having an LED array formed by a plurality of LED elements which are controlled to emit light in accordance with image data and a drive circuit for driving the plurality of LED elements; and

an LED array controller for driving and controlling the LED print head, wherein

the LED array controller includes:

a characteristic data memory for storing a plurality of pieces of characteristic data regarding each of the plurality of LED elements; and

a light emission time correction data calculator for reading out characteristic data of a predetermined LED element and an average value of characteristic data of a plurality of LED elements in a predetermined range including the predetermined LED element out of the plurality of pieces of characteristic data from the characteristic data memory, and calculating light emission time correction data for the predetermined LED element on a basis of the

characteristic data of the predetermined LED element and the average value of the characteristic data regarding each of the plurality of LED elements in the predetermined range.

20. An image forming apparatus comprising:

an LED print head having an LED array formed by a plurality of LED elements which are controlled to emit light in accordance with image data and a drive circuit for driving the plurality of LED elements; and

an LED array controller for driving and controlling the LED print head, wherein

the LED array controller includes:

a characteristic data memory for storing a plurality of pieces of characteristic data regarding each of the plurality of LED elements; and

a light emission time correction data calculator for reading out characteristic data of a predetermined LED element and an average value of characteristic data of all of the plurality of LED elements forming the LED array out of the plurality of pieces of characteristic data from the characteristic data memory, and calculating light emission time correction data for the predetermined LED element on a basis of the characteristic data of the predetermined LED element and the average value of the characteristic data of all of the plurality of LED elements forming the LED array.

21. An image forming apparatus according to claim 13, wherein

the light emission time correction data satisfies the following equation:

$T_n = a'_n + \alpha \cdot (b_n - B_{ave}) / B_{ave}$

where T_n represents light emission time correction data of the n-th LED element,

a'_n represents light emission time reference data of the n-th LED element for making the light quantity for each of the LED element substantially equal,

b_n represents data regarding a beam of the n-th LED element,

B_{ave} represents an average value of data regarding beams of all of the LED elements or an average value of data regarding beams of a plurality of LED elements in a predetermined range including the n-th LED element, and

α represents an arithmetic coefficient regarding a beam.

22. An image forming apparatus according to claim 13, wherein

the light emission time correction data satisfies the following equation:

$$T_n = a'_n + \alpha \cdot (b_n - B_{ave}) / B_{ave} + \beta \cdot (c_n - C_{ave}) / C_{ave}$$

where T_n represents light emission time correction data of the n-th LED element,

a'_n represents light emission time reference data of the n-th LED element for making the light quantity for each of the LED element substantially equal,

b_n represents data regarding a beam of the n-th LED element,

B_{ave} represents an average value of data regarding beams of all of the LED elements or an average value of data regarding beams of a plurality of LED elements in a predetermined range including the n-th LED element,

α represents an arithmetic coefficient regarding a beam,

c_n represents resolution data of the n-th LED element,

C_{ave} represents an average value of resolution data of all of LED elements or an average value of resolution data of a plurality of LED elements in a predetermined range including the n-th LED element, and

β represents an arithmetic coefficient regarding resolution.

23. An image forming apparatus comprising:

an LED print head having an LED array formed by a plurality of LED elements which are controlled to emit light in accordance with image data and a drive circuit for driving the plurality of LED elements; and

an LED array controller for driving and controlling the LED print head, wherein

the LED array controller includes:

a characteristic data memory for storing a plurality of pieces of characteristic data regarding each of the plurality of LED elements;

an LED element characteristic data arranger for reading out the characteristic data from the characteristic data memory and arranging the characteristic data for each of the plurality of LED elements; and

a light emission time correction data calculator for calculating light emission time correction data for each of the plurality of LED elements on a basis of the characteristic data arranged for each of the plurality of LED elements by the LED element characteristic data arranger.

24. An image forming apparatus according to claim 23, further comprising:

an LED element characteristic data memory for storing characteristic data arranged for each of the LED elements by the LED element characteristic data arranger.